

### Remarks

Claims 1-31 are currently pending in the present application. Claims 1 and 18 are independent claims, which have been amended herein for clarification. Claims 20, 21, 25, 27-29 and 31 have also been amended for clarification. Minor amendments to the specification have also been made to correct minor errors. All claims have been rejected in the Office Action dated March 24, 2004. Applicant traverses each of these rejections as discussed in detail below.

### ***Rejections Under 35 USC. §102***

The Office Action rejects claims 1-10, 16-28, 30 and 31 under 35 U.S.C. §102(e) as being anticipated by US Patent No. 6,487,600 to Lynch. ("Lynch"). However, as will be discussed in greater detail below, Lynch does not anticipate claim 1 because, among other things, Lynch does not disclose connecting remote clients "as if they were connected to a LAN". In the claimed invention, a LAN-like virtual network is established using a "virtual network generation (VNG) system that is also not anticipated by Lynch. To clarify, in accordance with the present invention:

A PNC is, preferably, setup and controlled automatically, dynamically and remotely by a PNC control system, which has the ability to route through public networks in a manner that enables substantially similar security and functionality available in traditional private networks, such as a LAN. From the perspective of the end-user at a client, the nature of the physical network through which information is routed is irrelevant. The PNC appears to the end-user as a traditional, dedicated private network that emulates a natural, familiar and standard LAN workflow.

(Application, p. 5 lines 9-15, emphasis added)

Lynch does not disclose such a network. Rather, Lynch discloses ***dynamic manifest network*** where network members can communicate – but there is no suggestions that this network is LAN-like to enable "standard LAN workflow". For example, the Abstract of Lynch discloses:

A dynamically configured user network services a plurality of network members. A metanetwork definition identifies the members of the dynamic manifest network and provides the rules by which the network members establish links among themselves and communicate. Each of the network members employs a client communication device to communicate with another network member

according to the metanetwork definition. Another centrally located computer, a network friend, may assist in setting upon and managing the dynamic manifest network via creating and altering the metanetwork definition. ... The network friend has the basic structure of a web server ... A metanetwork definition is setup by an initiating network member. The metanetwork definition defines the dynamic manifest network and how communications will occur within the dynamic manifest network. A local view of the metanetwork is then created for each network member. A respective local view of the metanetwork is then provided to each network member. Each network member then establishes links with other network members and communicates with the other network members according to the local view. (Lynch, Abstract, emphasis added)

As will be apparent from review of individual elements of claim 1 and various components of Lynch, the structural differences between the two make Lynch incapable of providing a LAN-like PNC as provided in claim 1. To better clarify the present invention various elements will be specifically discussed and contrasted to Lynch.

With respect to claim 1, element A, the office action asserts that “virtual network generation (VNG) system” of this element is anticipated by the “network friend” of Lynch, and that the “PNC attributes, including ... client attributes and ... network attributes” are anticipated by the “metanetwork definition” stored at the network friend.

According to Lynch, the *metadefinition* accomplishes 2 basic functions: a) “identifies members of the dynamic manifest network” and b) “provides the rules by which the network members communicate”. Lynch states that the *network friend* “may assist ... by creating and altering the metanetwork definition”, where the “[m]anagement functions include receiving feedback from dynamic manifest members and using the feedback to modify the metanetwork definition.” (Lynch, col. 3 line 55 –col. 4 line 3, see also, col. 6 lines 12-50) However, the VNG system of the claim does not use feedback from clients to modify the PNC attributes – i.e., the VNG system does not change the PNC attributes that were initially defined by a user.

Another significant, and perhaps more fundamental, departure from of Lynch’s *network friend* from the VNG system of this claim can be appreciated with the following text from Lynch:

Link formation and subsequent communications among network

members of a dynamic manifest network are accomplished directly from network member to network member without direct intervention of the network friend 102. However, the network friend 102 (in the described embodiment) does define the potential link structure of each dynamic manifest network and keeps track of such potential link structure(s) in the metanetwork configuration 104. Thus, when a network member initially joins a metanetwork, a local view of the dynamic manifest network that the network member joins is created from the metanetwork. The local view of the dynamic manifest network is then downloaded to the network member (or distributed via computer readable medium) to apprise the network member of the structure and communication rules for the dynamic manifest network. Subsequently, the network member establishes links with, and then communicates, with other network members of the dynamic manifest network according to the structure and communication rules. In another embodiment, however, the definition of the metanetwork is a collection of local views created and maintained by the network members. In such a structure, the network friend is not required.

(Lynch, col. 6 line 51- col. 7, line 5, emphasis added)

Therefore, according to Lynch, the *network friend* is needed to provide the “local view” to each network member – but **does not** participate in the communication between the network members (or clients, in the case of claim 1). Regardless of the *network friend’s* dynamic changing of the metanetwork definition using feedback, as mentioned above, the communication between network members in Lynch is direct, and not via the *network friend*.

Claim 1, element A has been amended to clarify that the clients link to the VNG system. Element D has also been amended to clarify that the clients coordinate the communication link via the VNG system, the VNG system centrally controls that connection and that session communication between clients can either flow directly or via the VNG system as well, unlike Lynch where the network members communicate directly with each other and expressly not through the network friend – in fact, the *network friend* is not even required. Because the clients in claim 1 connect to the VNG system, and the VNG system (as provided in the first quote above) “has the ability to route through public networks in a manner that enables substantially similar security and functionality available in traditional private networks, such as a LAN”, the VNG system can create the LAN-like network. But in Lynch, communication is directly between the network members, without the

*network friend*, so the network friend, important contrast to the VNG system, can not create a LAN-like environment. For the foregoing reasons, Applicant contends that the VNG system of claim 1 is not anticipated by the *network friend* of Lynch.

With respect to **element B**, Lynch does not disclose a “VNG system data store including PNC information related to said plurality of clients and a plurality of network types”. With respect to this element, the office action stated that “the network friend contains information about the clients and metanetwork.” Yet, FIG. 2 of Lynch (indirectly referenced by the office action) shows that in step 166 the user must “enter known member inform[ation]”, which is sent to the network friend in step 168. The result, therefore, is that the *network friend* **does not**, in fact, possess client information in a data store – but rather **needs it provided from a network member**. Further, as is clear in the Abstract of Lynch, the *network friend* also does not access a data store for network attributes, but also needs that provided by a user. Without that information being provided by a network member, the *network friend* could not, in step 172, create the metanetwork definition. Lynch teaches away from element B, which claims accessing an existing data store of client and network information.

With respect to **element C**, the office action states that “authenticating”, as provided by this element, is also anticipated by Lynch. But, in fact, upon closer review Lynch and the present invention authenticate much differently. That is, Lynch discloses authentication to be **between network members**, as follows:

Further, authentication rules are set in place so that, prior to the exchange of a communication between network members across a link (two network members) the network members authenticate each other. Further, once the network members have authenticated each other, encryption/decryption rules may be enacted to further secure the communications across the link.

(Lynch, col. 4 lines 36-39, emphasis added)

However, in the present invention, clients authenticate with the VNG system, as a prerequisite to entering the PNC (private network community). For example, as provided in the Summary of Invention of the present application:

The core functionality hosted by the VNG server(s) may include

several modules necessary for establishing and managing each PNC, authenticating users ...

(Application, p. 7 lines 14-15)

A user may be required to initially register and subsequently authenticate, via the Web interface, with the VNG system prior to being enabled to create or join a PNC.

(Application, p. 8 lines 19-21)

See also flowchart 600 of FIG. 6 and the registration and authentication manager 342 of FIG. 7, and the respective text in the specification of the present application. Since in Lynch the network members do not authenticate with the network friend, but rather with each other, Lynch does not anticipate the “authenticating” step of this element of claim 1.

With respect to **element D** of claim 1, the office action states that “establishing a PNC ...” is anticipated by “directly connecting clients after establishing a group” as disclosed in Lynch. As mentioned above, this element of claim 1 has been amended to clarify that communication in the present invention among the clients is initiated, coordinated and controlled via the VNG system. This amendments is supported through the specification, where the roles and components of the VNG system are detailed. (e.g., Application, p. 5 first paragraph; p. 33 first paragraph and FIG. 8A-C) No direct client-to-client instantiation is allowed, without the VNG system. Only when the VNG system control channel is in place may the client assume session communication in which the data may either flow directly or via the VNG system. As also shown above, Lynch explicitly discloses direct communication between network members, which clearly does not take place via the *network friend*, which is not even required. That is, the VNG system is part of the communication in the present invention, and in doing so enables the LAN-like communication. Lynch does not anticipate this, and structurally and functionally teaches away from this type of network.

For all of the foregoing reasons, Lynch does not anticipate claim 1. The Applicant respectfully requests removal of this rejection.

For the same reasons, Applicant asserts that Lynch does not anticipate those claims that depend from claim 1 and rejected under this section of the patent statute. Accordingly, the Applicant

further requests removal of the rejections to claims 2-10, 16, and 17, which depend from claim 1.

Claim 18 is an apparatus claim that corresponds to method claim 1. Accordingly, claim 18 has been amended in a manner similar to that of claim 1. Therefore, for the same reasons put forth with respect to claim 1, the Applicant asserts that claim 18 is not anticipated by Lynch. Applicant respectfully requests removal of the rejection to claim 18 and its dependent claims 19-28, 30, and 31.

### ***Rejections Under 35 USC. §103***

The Office Action rejects claims 11-15 and 29 under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 6,487,600 to Lynch (“Lynch”) in view of US Patent No. 6,427,071 to Adams et al. (“Adams et al”) The office action acknowledges that Lynch does not anticipate or make obvious wrapping and unwrapping packets, but asserts that Adams does teach this. Generally, the Applicant asserts that there is no motivation to combine Lynch and Adams, since Adams discloses secure communication between “a controller and a signaling network” (see Abstract of Adams) and Lynch teaches establishing communication between two network members (as peers). Nevertheless, assuming the combination, the Applicant believes the two references do not make obvious claims 11-15 and 29.


Claims 11-15 depend from claim 1, discussed in detail above with respect to Lynch. Therefore, Applicant believes that, like independent claim 1, dependent claims 11-15 are patentable over Lynch, even if combined with Adams. Accordingly, Applicant respectfully requests removal of the rejections to claims 11-15.

Claim 29 depends from claim 18, discussed in detail above with respect to Lynch. Therefore, Applicant believes that, like independent claim 18, dependent claim 29 is patentable over Lynch, even if combined with Adams. Accordingly, Applicant respectfully requests removal of the rejections to claim 29.

The Applicant respectfully request removal of the foregoing rejections and allowance of pending claims 1-31, as variously amended herein. The Commissioner is hereby authorized to

charge any additional fees under 37 C.F.R. §1.16 and §1.17 that may be required, or credit any overpayment, to our Deposit Account No. 50-1133.

Respectfully submitted,

  
David M. Mello, Reg. No. 43,799  
McDermott Will & Emery LLP  
28 State Street  
Boston, MA 02109  
Tel.: (617) 535-4037  
Facsimile: (617) 535-3800  
E-mail: dmello@mwe.com

Date: September 8, 2004